

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

DANNEMANN, SIEMSEN, BIGLER & IPANEM
A MOREIRA
Caixa Postal 2142
Rua Marquês de Olinda, 70
22251-040 Rio de Janeiro, RJ
BRESIL

SP

PCT

**NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY**

(PCT Rule 71.1)

Applicant's or agent's file reference P128732-PCT		Date of mailing (day/month/year) 31.01.2006	
International application No. PCT/BR2004/000232	International filing date (day/month/year) 24.11.2004	Priority date (day/month/year) 25.11.2003	
IMPORTANT NOTIFICATION			
Applicant EMPRESA BRASILEIRA DE COMPRESSORES S.A.-EMBRACO a/			

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/I/B/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty; inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Voyé-Piccoli, A Tel. +49 89 2399-8003
	

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P128732-PCT	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/BR2004/000232	International filing date (day/month/year) 24.11.2004	Priority date (day/month/year) 25.11.2003	
<p>International Patent Classification (IPC) or national classification and IPC G05D23/24</p>			
<p>Applicant EMPRESA BRASILEIRA DE COMPRESSORES S.A.-EMBRACO a/</p>			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 17 sheets, as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application 			
Date of submission of the demand 23.09.2005	Date of completion of this report 31.01.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Vaño Gea, J Telephone No. +49 89 2399-7671		

INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY

International application No.
PCT/BR2004/000232

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1 received on 23.09.2005 with letter of 23.09.2005
2-13 filed with telefax on 26.12.2005

Claims, Numbers

1-32 filed with telefax on 26.12.2005

Drawings, Sheets

1/3-3/3 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

- The amendments have resulted in the cancellation of:
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):
- This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages
 - the claims, Nos.
 - the drawings, sheets/figs
 - the sequence listing (*specify*):
 - any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/BR2004/000232

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-32
	No: Claims	
Inventive step (IS)	Yes: Claims	1-32
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-32
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/BR2004/000232

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 The following document was cited in the International Search Report:

D1: US-A-5 564 831 (BASHARK ET AL) 15 October 1996

1.1 The following document is further considered to be relevant (Article 33(6) PCT).

D2: WO 03/095960 A1, 20 November 2003

2 Document D2 is considered to represent the most relevant state of the art for independent claim 1.

2.1 Document D2 discloses

- a) a sensing assembly 1 comprising a set of turns of an electrical winding coil 5 and an interaction element 4 adjustable by a user, the set of turns and the interaction element being movable in relation to each other, the set of turns being subjected to a sampling voltage and having a resistance (D2, figure 1 and abstract),
- b) the sensing assembly being suitable for the measurement of a temperature of an environment, the measurement of the temperature of the environment being obtained from the alteration of the resistance of the set of turns (D2, page 10, line 23 to page 12, line 4 and figure 5),

from which the subject-matter of claim 1 differs in that

- c) the sensing assembly is further suitable for defining the temperature set-point of a cooling system, the definition of the temperature set point of the cooling system being obtained from the inductance of the set of turns, by displacing the interaction element with respect to the set of turns.

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.
PCT/BR2004/000232

2.2 The technical problem to be solved by the present invention may be regarded as to measure the temperature of an environment and adjusting the temperature set point of a cooler by means of a single simple element.

2.3 Although document D2 discloses the simultaneous use of the sensing assembly as a position sensor and as a temperature sensor (see D2, page 10, line 23 to page 12, line 4), no hint can be found in the prior art that would lead the skilled person to use said sensing assembly as a temperature set point selector as according to document D1 (see D1, column 10, lines 31-42 and figure 1) in order to achieve temperature control employing an inductive position detector.

2.4 The subject-matter of independent claim 1 is therefore **novel** and **inventive** (Articles 33(2) and (3) PCT).

3 Document **D1** is considered to represent the most relevant state of the art for independent claim 14.

3.1 Document D1 discloses

- a) a temperature set point adjusting and a temperature of an environment measuring system for a temperature control system, the adjusting and measuring system comprising a sensing assembly and a processing unit (D1, column 10, lines 31-42, abstract and figure 1),
from which the subject-matter of claim 14 differs in that
- b) the temperature control system is a cooling system and
- c) the sensing assembly has the features defined in claim 1.

3.2 The technical problem to be solved by the present invention may be regarded also here as to
measure the temperature of an environment and adjusting the temperature set point of a cooler by means of a single simple element.

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/BR2004/000232

- 3.3 Although feature b) is considered to be trivial, the reasoning of section 2.3 applies mutatis mutandis to claim 14 with respect to feature c).
- 3.4 The subject-matter of independent claim 14 is therefore **novel** and **inventive** (Articles 33(2) and (3) PCT).
- 4 The corresponding independent claim 28 is **novel** and **inventive** for the same reasons as claim 14 (Articles 33(2) and (3) PCT).
- 5 Claims **2 to 13, 15 to 27 and 29 to 32** are dependent on claims 1, 14 and 28, respectively, and as such also meet the requirements of the PCT with respect to novelty and inventive step.